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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/955,525	09/18/2001	Leonard Alan Collins	171328.01	8577

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MICROSOFT CORPORATION  
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EXAMINER

SHAW, PELING ANDY

ART UNIT	PAPER NUMBER
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2144

DATE MAILED: 04/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	09/955,525	COLLINS, LEONARD ALAN	
	Examiner	Art Unit	
	Peling A. Shaw	2144	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 15 February 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 43-69 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 43-69 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

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### DETAILED ACTION

1. Amendment received on 02/15/2006 has been entered. Claims 28-42 are cancelled.

Claims 43-69 are new. Claims 43-69 are still pending.

2. Amendment received on 06/30/2005 was entered. Claims 1-27 were cancelled. Claims 28-42 were new.

### *Priority*

3. This application has no priority claim made. The filing date is 09/18/2001.

### *Claim Rejections - 35 USC § 112, second paragraph*

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 43-69 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a. Claims 43, 50 and 67 recite the limitation of "hole-punching" which renders the claims indefinite. More specific limitation (preamble) should be used. Otherwise, claims 43, 50 and 67, and their dependent claims, i.e. claims 44-49, 51-66 and 68-69 are rejected. For the purpose of applying art, claims are read with no regards the limitation of "hole-punching", i.e. as if the limitation is deleted.
- b. Claims 43, 64 and 67 recite the limitation of "immaterial" which renders the claims indefinite. More specific limitation should be used. Otherwise, claims 43, 64 and 67, and their dependent claims, i.e. claims 44-49 and 68-69 are rejected. For the purpose of applying art, claims are read with no regards the limitation of cited the

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“immaterial”, i.e. as if the statement containing the limitation of “immaterial” is deleted.

- c. Claims 44 and 52 recite the limitation of “harmless” which renders the claims indefinite. More specific limitation (preamble) should be used. These claims are thus rejected.
- d. Claims 45 and 53 recite the limitation of “wherein the network address translator is a plurality of network address translators coupled in series” which renders the claims indefinite. Claims 45 and 53 are thus rejected.
- e. Claim 46 recites the limitation of “wherein the creating and the sending of the hole-punching message is initiated by a network communications stack” which is not clearly specified in the original specification or claims. It renders the claim indefinite. Claim 46 is thus rejected.
- f. Claims 48 and 54 recite the limitation of “wherein the remote device is behind an additional network address translator” which is not clearly specified in the original specification or claims. It renders the claims indefinite. Thus claims 48 and 54 are rejected.
- g. Claim 69 recites the limitation of “The local device of claim 68 embodied on a computer-readable medium” which describes a device to be in a computer-readable medium. It renders the claim 69 indefinite and thus to be rejected.

Appropriate corrections are required.

***Claim Rejections - 35 USC § 112, first paragraph***

5. Claims 45 and 53 are rejected under 35 U.S.C. 112, first paragraph, as containing new subject matter which was not described in the original specification or claims.

- a. Claims 45 and 53 recite the limitation of “wherein the network address translator is a plurality of network address translators coupled in series” which is not found the original specification of claims. It introduces a new subject matter. Claims 45 and 53 are thus rejected.

***Claim Rejections – 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 43, 47, 49-51, 55-63 and 67-68 are rejected under 35 U.S.C. 102(b) as being anticipated by Srisuresh, et al., (U.S. Patent Number 6,058,431), hereinafter referred as Srisuresh.

- a. Regarding claim 43, Srisuresh disclosed a method comprising: creating a hole-punching message addressed to a remote device and configured to enable a network address translator to create an address mapping; sending the hole-punching message such that the hole-punching message is processed by the network address translator, such that the address mapping is created (column 5, line 45-column 6, line 11, Fig. 2: PC108a initiates an outbound session and transmits data with locally significant IP address to be translated to a globally significant address by the stub router 106).

- b. Regarding claim 47, Srisuresh disclosed the method of claim 43 wherein the creating and the sending of the hole-punching message is initiated by a program (column 8, line 49-53, Fig. 6).
- c. Regarding claim 49, Srisuresh disclosed the method of claim 43 wherein the method is embodied in computer-executable instructions stored on computer-readable media (column 8, line 49-53, Fig. 6).
- d. Regarding claim 50, Srisuresh disclosed a method performed by a program (column 8, line 49-53, Fig. 6) operating on a local device, the method comprising: creating a hole-punching message addressed to a remote device; configuring the hole-punching message to enable a network address translator to create a unique address mapping; sending the hole-punching message; and wherein the hole-punching message is received and processed by the network address translator such that the unique address mapping is created , such that a subsequent unsolicited communication sent from the remote device to the program via the network address translator is forwarded to the program utilizing the unique address mapping (column 5, line 45-column 6, line 11, Fig. 2: PC108a initiates an outbound session and transmits data with locally significant IP address to be translated to a globally significant address by the stub router 106).
- e. Claim 51, 55-56, 61 and 67 are of the same scope as claim 50. These are rejected for the same reasons as for claim 50.

- f. Regarding claim 57, Srisuresh disclosed the method of claim 50 wherein the unique address mapping includes a public address of the remote device (column 5, line 61-62: IP destination address).
- g. Regarding claim 58, Srisuresh disclosed the method of claim 50 wherein the unique address mapping includes a private address of the local device (column 5, line 59-60: locally significant source IP address).
- h. Regarding claim 59, Srisuresh disclosed the method of claim 50 wherein the unique address mapping is operative for communications formatted using Transmission Control Protocol (column 4, lines 17-37: TCP).
- i. Regarding claim 60, Srisuresh disclosed the method of claim 50 wherein the unique address mapping is operative for communications formatted using User Datagram Protocol (column 4, lines 17-37: UDP).
- j. Regarding claim 62, Srisuresh disclosed the method of claim 50 wherein the local device is coupled to the network address translator via a private network (column 4, lines 17-37: private address domain).
- k. Regarding claim 63, Srisuresh disclosed the method of claim 50 wherein the network address translator is coupled to the remote device via the Internet (column 4, lines 17-37: public address domain, IP v.4).
- l. Claim 68 is of the same scope as claims 59-60. It is rejected for the same reasons as for claims 59-60.

Srisuresh disclosed all limitations of claims 43, 47, 49-51, 55-63 and 67-68. Claims 43, 47, 49-51, 55-63 and 67-68 are rejected under 35 U.S.C. 102(b).

*Claim Rejections - 35 USC § 103*

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 65-66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Srisuresh et al. (US 6058431 A), hereinafter referred as Srisuresh, and further in view of Berg et al. (US 6674713 B1), hereinafter referred as Berg.

- a. Srisuresh disclosed claim 50 as above. Srisuresh does not show (claim 65) wherein the hole-punching message is formatted to include a NULL content field.
- b. Berg shows (claim 65) wherein the hole-punching message is formatted to include a NULL content field (column 22, line 25-44: NUL segment) in an analogous art for the purpose of method and apparatus for providing continuous voice and call communications between a data network and a telephony network.
- c. It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify Srisuresh's functions of system and method for network address translation as an external service in the access server of a service provider with Berg's functions of using null packet.
- d. The modification would have been obvious because one of ordinary skill in the art would have been motivated to use a null packet for keeping packet data connection alive per Berg's teaching (column 22, lines 25-44) in providing network accessing



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control per Srisuresh (column 2, lines 27-45: using a network address translator on an access server for locally and globally IP address translation) and Berg (column 17, lines 9-17: RUDP is used as a simple packet based transport protocol and provides reliable in-order delivery for virtual connection )'s teaching.

- e. Regarding claim 66, Srisuresh shows wherein the hole-punching message is formatted using Transmission Control Protocol or User Datagram Protocol (column 4, lines 17-37: TCP/UDP).

Together Srisuresh and Berg disclosed all limitations of claims 65-66. Claims 65-66 are rejected under 35 U.S.C. 103(a).

***Response to Arguments***

8. Applicant's arguments with respect to pending claims have been considered but are moot in view of the new ground(s) of rejection.

- a. Applicant has cancelled all previous submitted claims. With newly added claims, applicant alleges that the claimed invention is distinct over the previous cited art. Examiner has examined the newly added claims in comparison with the previously cancelled claims with respect to the cited prior arts in the previous office actions. The newly added claims still stand being rejected under the previously cited arts. For detail see the rejection sections above.

***Remarks***

9. The following pertaining arts are discovered and not used in this office action. Office reserves the right to use these arts in later actions.

- a. Egevang et al. (RFC 163, May 1994) The IP Network Address Translator
- b. BODEN et al. (US 6266707 B1) System and method for IP network address translation and IP filtering with dynamic address resolution

*Conclusion*

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Refer to the enclosed PTO-892 for details.

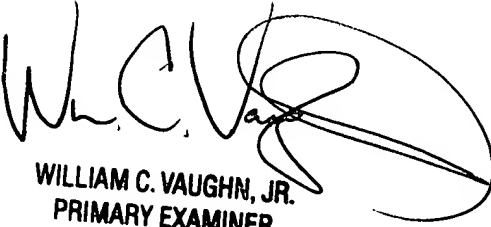
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peling A. Shaw whose telephone number is (571) 272-7968. The examiner can normally be reached on M-F 8:00 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William C. Vaughn can be reached on (571) 272-3922. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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WILLIAM C. VAUGHN, JR.  
PRIMARY EXAMINER